WHAT IS CLAIMED IS:

1. A method of producing an anodic foil for use in a capacitor, comprising the steps of:

(a) anodizing the foil;

(b) hydrating the foil; and

(c) forming a barrier oxide layer on said foil, wherein steps (a) and (b) are performed prior to step (c).

2. The method of claim 1, wherein said anodizing step comprises dipping said foil in an anodizing composition and applying a current to form a nano-porous amorphous oxide layer on said foil.

3. The method of claim 2, wherein said anodizing composition comprises an aqueous solution of an oxidizing acid, said oxidizing acid selected from the group consisting of sulfuric acid, oxalic acid, phosphoric acid, and tartaric acid.

4. The method of claim 3, wherein said anodizing composition is an aqueous solution of sulfuric acid.

5. The method of claim 2, wherein said current is about 200 mA/cm^2.

6. The method of claim 5, wherein said anodizing step is carried out for a time duration of about 5 minutes to about 10 minutes.

7. The method of claim 6, wherein said anodizing step is carried out for a time duration of about 6 minutes to about 7 minutes.

8. The method of claim 1, wherein said anodizing step is carried out at a temperature of about -25 °C to about 45 °C.

9. The method of claim 8, wherein said anodizing step is carried out at a temperature of about 15 °C to about 25 °C.

10. The method of claim 3, wherein said anodizing composition comprises from about 1% to about 50% by weight of said oxidizing acid.

11. The method of claim 10, wherein said anodizing composition comprises from about 5% to about 20% by weight of said oxidizing acid.

12. The method of claim 11, wherein said anodizing composition comprises from about 10% to about 20% by weight of said oxidizing acid.

13. The method of claim 12, wherein said anodizing composition comprises about 10% by weight of said oxidizing acid.

14. The method of claim 2, wherein said nano-porous amorphous oxide layer has a thickness of about 300 nm to about 700 nm.

15. The method of claim 14, wherein said nano-porous amorphous oxide layer has a thickness of about 350 nm to about 500 nm.

16. The method of claim 15, wherein said nano-porous amorphous oxide layer has a thickness of about 500 nm.

17. The method of claim 1, wherein said hydrating step comprises dipping said foil in a bath of deionized water at a temperature of about 85 °C to about 100 °C.

18. The method of claim 17, wherein said hydrating step comprises dipping said foil in a bath of deionized water at a temperature of about 95 °C.

19. The method of claim 1, wherein said hydrating step is carried out for a time duration of about 1 minute to about 3 hours.

20. The method of claim 18, wherein said hydrating step is carried out for a time duration of about 6 minutes to about 12 minutes.

21. The method of claim 1, wherein after step (a) and prior to step (b), said foil is rinsed in an overflow bath of deionized water.

22. The method of claim 1, wherein step (c) comprises placing said foil in a first forming composition at a first applied voltage.

23. The method of claim 22, wherein said forming composition comprises an aqueous solution of low concentration citric acids.

24. The method of claim 22, wherein said forming composition comprises an aqueous solution of low concentration carboxylic acids.

25. The method of claim 22, wherein said applied voltage is about 400 Volts to about 500 Volts.

26. The method of claim 25, wherein said applied voltage is about 430 Volts to about 485 Volts.

27. The method of claim 22, wherein said forming step is carried out at a temperature of about 85 °C to about 100 °C.

28. The method of claim 27, wherein said forming step is carried out at a temperature of about 85 °C.

29. The method of claim 22, wherein step (c) further comprises heat treating said foil.

30. The method of claim 29, wherein said heat treating step is carried out at a temperature of about 350 °C to about 550 °C for a time duration of about 1 minute to about 10 minutes.

31. The method of claim 22, wherein step (c) further comprises dipping said foil in an aqueous solution of phosphoric acid.

32. The method of claim 31, wherein said foil is dipped in an aqueous solution comprising about 1% to about 10% by weight of phosphoric acid for a time duration of about 4 minutes to about 12 minutes at a temperature of about 50 °C to about 70 °C.

33. The method of claim 29, wherein step (c) further comprises reforming said barrier oxide layer on said foil.

34. The method of claim 33, wherein said reforming step comprises dipping said foil in a second forming composition at a second applied voltage.

35. The method of claim 33, wherein prior to said reforming step, said foil is rinsed in an overflow bath of deionized water.

36. The method of claim 31, wherein step (c) further comprises reforming said barrier oxide layer on said foil.

37. The method of claim 36, wherein said reforming step comprises dipping said foil in a second forming composition at a second applied voltage.

38. The method of claim 36, wherein prior to said reforming step, said foil is rinsed in an overflow bath of deionized water.

39. An anodic foil produced by the method of claim 1.

40. The anodic foil of claim 39, wherein the oxide layer formed on said anodic foil has a rise time of less than 15 seconds after 2 hours of exposure to boiling water.

41. The anodic foil of claim 40, wherein the oxide layer formed on said anodic foil has a rise time of about 1 second to about 3 seconds after 2 hours of exposure to boiling water.

42. An electrolytic capacitor comprising an anodic foil produced by the method of claim 1.

43. An implantable cardioverter defibrillator comprising an electrolytic capacitor having an anodic foil produced by the method of claim 1.

44. A method of producing an anodic foil for use in a capacitor, comprising the steps of:

(a) anodizing said foil by placing said foil in an aqueous solution of an oxidizing acid at a temperature of about 15 °C to about 25 °C and applying a current;

(b) hydrating said foil in a bath of deionized water at a temperature of about 80 °C to about 100 °C;

(c) forming a barrier oxide layer on said foil by placing said foil in a first forming composition and applying a first voltage to said foil;

(d) heat treating said foil;

(e) reforming said barrier oxide layer on said foil by placing said foil in a second forming composition and applying a second voltage to said foil; and

(f) dipping said foil in an aqueous solution of phosphoric acid.

45. The method of claim 44, further comprising annealing said foil, wherein said annealing comprises heat treating said foil at a temperature of about 250 °C to about 350 °C for a time duration of about 1 minute to about 5 minutes.

46. An anodic foil produced by the method of claim 44.

47. The anodic foil of claim 46, wherein the oxide layer formed on said anodic foil has a rise time of less than 15 seconds after 2 hours of exposure to boiling water.

48. The anodic foil of claim 47, wherein the oxide layer formed on said anodic foil has a rise time of about 1 second to about 3 seconds after 2 hours of exposure to boiling water.

49. An electrolytic capacitor comprising an anodic foil produced by the method of claim 44.

50. An implantable cardioverter defibrillator comprising an electrolytic capacitor having an anodic foil produced by the method of claim 44.

51. A method of producing an anodic foil for use in a capacitor, comprising the steps of:

(a) anodizing the foil to produce a nano-porous amorphous oxide layer; and

(b) hydrating the foil to convert said nano-porous amorphous oxide layer to a crystalline precursor layer.